

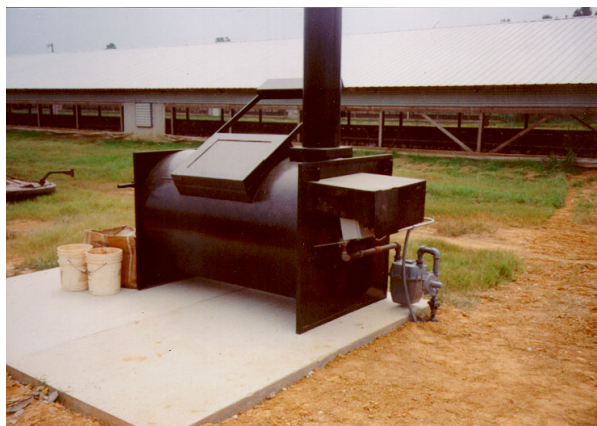
# NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

## INTERIM

## INCINERATOR

(No.)

CODE 769



### DEFINITION

An incinerator used to dispose of dead poultry, suckling pigs, or other small animals.

### PURPOSE

This practice may be applied as part of a conservation management system to provide a suitable disposal method of dead poultry or small animals to prevent pollution and improve environmental quality. This standard covers the planning and design of a manufactured incinerator for the disposal of dead poultry or small animals encountered on farms as part of normal farming operations.

### CONDITIONS WHERE PRACTICE APPLIES

This practice applies where current disposal practices of dead poultry or small animals are unsatisfactory and where there is a need to improve sanitation, reduce pollution, or enhance water quality. The incinerator must be located on a farm and is owned and operated by the farm owner or by the farm operator.

The incinerator is used solely to dispose of animals or poultry originating on the farm where the incinerator is located.

### CRITERIA

**General.** All Federal, state, and local laws, rules, and regulations governing waste management, pollution abatement, and health and safety shall be strictly followed. The owner or operator shall be responsible for securing all required permits, approvals, and registration and for the operation of the unit in accordance with appropriate laws, rules, and regulations. Permits must be obtained prior to construction and operation.

**Emissions.** Incinerator particulate matter emissions, carbon monoxide (CO) emissions, and visible emissions shall not exceed the requirements of the North Carolina Division of Air Quality.

The incinerator shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

The incinerator must comply with the visible emission rule (for most of these incinerators, the opacity requirement is 20%) and the general odor rule is no objectionable odors beyond the farm boundary.

**Capacity.** The required minimum incinerator capacity shall be based on the maximum daily weight of animal carcasses during a typical growing cycle. The maximum daily weight of animal carcasses shall be based on mortality data over several growing cycles excluding catastrophic losses. In the absence of specific landowner mortality data, incinerator capacity shall be based on similar operations in the local area.

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

**NRCS, NC  
March, 2001**

The required minimum incinerator size shall be the smallest size available that will incinerate the required minimum capacity in 2 or 3 burns within a 24 hour period of time.

The incinerator shall not be charged at a rate that exceeds its design capacity.

**Material.** Incinerators installed under this standard shall be constructed of durable material with a life expectancy equal to the planned life of the structure.

**Location.** Incinerators shall be located a sufficient distance, as recommended by the manufacturer, from any building to prevent spontaneous combustion.

The placement of the fuel tank with respect to the incinerator will comply with all safety regulations.

**Protection.** The incinerator will be located on a reinforced (fiber or steel) concrete slab for stability and safety. The concrete slab shall extend sufficient distance on all sides of the incinerator base to accommodate management of the facility. The top of the concrete slab shall be a minimum of 0.5 foot above natural ground. The area surrounding the concrete slab shall be shaped in such a way as to drain or divert all overland and roof runoff safely away from the structure and surrounding work area.

**Installation.** Electrical installation shall meet the requirements of the National Electrical Code (NEC) and state and local codes and must be certified in writing by a qualified licensed electrician. All electric wiring shall be in a conduit at the incinerator.

Gas hook-up must be certified in writing by a qualified licensed Liquefied Petroleum contractor to meet applicable National Fire Protection Association (NFPA) codes; all other national, state and local codes; and in conformance with the manufacturer's recommendations.

Fuel storage for diesel powered units shall be installed in accordance with manufacturer's recommendations and shall meet all applicable state and local codes, rules and regulations.

**Vegetation.** All disturbed areas shall be vegetated in accordance with NRCS conservation practice standard Critical Area Planting, Code 342.

## CONSIDERATIONS

Consideration should be given to protecting the incinerator with a metal roof to extend the life of the unit. The roof structure will be constructed using non-combustible materials in accordance with manufacturer's recommendations. Size of structure and clearances shall be as recommended by the incinerator manufacturer.

Incinerators should be located as far as practical from any structure, well, spring, or surface watercourse. Recommended distances are as follows:

- at least 50 feet from any surface watercourse
- at least 100 feet from any well or water source
- at least 20 feet from any building to prevent spontaneous combustion

Growers should carefully estimate the capacity needed to manage daily mortalities and include other disposal methods in their resource management plan to cover situations in which heavy, unexpected losses occur.

Where air emissions are a concern, consideration should be given to alternate methods of disposal (composting, rendering, etc.).

Consideration should be given to the operating cost of the incinerator. Local fuel cost rates should be used to estimate these expenses.

Due consideration should be given to economics, the overall waste management system plan, and safety and health factors.

## PLANS AND SPECIFICATIONS

Plans and specifications shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended use.

## **OPERATION AND MAINTENANCE**

An operation and maintenance plan shall be developed that is consistent with the purposes of the practice, its intended life, safety requirements, and the criteria for its design.

Incinerators shall only be used for the cremation of dead animals.

Incinerators must be operated properly to maximize equipment life and minimize emission problems. Any operator of an incinerator shall be trained by the manufacturer's representative or an equivalent organization. A trained operator must be on-site when the incinerator is in operation.

The incinerator must be loaded according to manufacturer's recommendations. Ashes should be removed frequently to maximize combustion and prevent damage to equipment. Plans shall include methods for collecting and disposing of the ash material remaining after incineration. The plan shall include a dedicated metal ash collection box or container. The ash shall be land applied at agronomic rates. The incinerator must be inspected periodically to ensure that all components are operating as planned and in accordance with the manufacturer's recommendations.

## **REFERENCES**

NRCS conservation practice standard Critical Area Planting, Code 342

### **Attachment to Standard 769 - Incinerator**

The following is a list of single burner Incinerators for on-farm use from Shenandoah Manufacturing Company that meet the minimum requirements of Standard 769.

These are not the only incinerators that meet the standard, but Shenandoah is the only company so far that has provided a list.

A6-1G	LP gas fired	200 lb. capacity
A6-1GN	Natural gas fired	200-lb. capacity
A6-1O	Oil fired	200-lb. capacity
A10-1G	LP gas fired	250 lb. capacity
A10-1GN	Natural gas fired	250-lb. capacity
A10-1O	Oil fired	250-lb. capacity
A12-1G	LP gas fired	400 lb. capacity
A12-1GN	Natural gas fired	400 lb. Capacity
A12-1O	Oil fired	400-lb. capacity
A15-1G	LP gas fired	500 lb. capacity
A15-1GN	Natural gas fired	500-lb. capacity
A15-1O	Oil fired	500-lb. Capacity

# **SAMPLE**

## **OPERATION AND MAINTENANCE PLAN FOR INCINERATORS**

Owner / Operator : \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

### **RECOMMENDED GUIDELINES**

The purpose of incinerators is to provide a suitable disposal method of dead small animals to prevent pollution and improve environmental quality. The size and number of incinerators for your operation are designed to handle the normal expected daily mortality. The following guidelines shall be followed:

- The ash shall be routinely removed from the incinerator and stored in a metal ash collection box or bucket and evenly distributed according to the nutrient content of the ash on cropland, pasture, or hay land.
- Combustible materials shall not be stored adjacent to the incinerator.
- Care shall be taken to prevent gas or fuel spills and leaks at the incinerator site. Inspect fuel lines frequently. Fuel sources shall meet applicable state and local regulations on storage and transmission of volatile or flammable fuels.
- Operate the incinerator in accordance with the manufacturer's recommendations in order to prevent the emission of objectionable odors and excessive amounts of particulate material.

### **EMERGENCY DISPOSAL OF DEAD ANIMALS**

Unusually high mortality of animals during emergencies will need to be handled with emergency procedures. It is recommended that you make specific plans for animal disposal in the event of an emergency. Depending on the type and degree of emergency, there are several alternatives. Disposal by a rendering company should be the preferred method of carcass disposal. When this method is not available, on-farm disposal will have to be considered. On-farm methods include burial and composting. Of these two methods, composting is considered the most environmentally sound. Contact your local NRCS office for recommendations when composting is the selected alternative. When burial is determined to be the disposal method of choice, the following burial standards established by the **State Animal Response Team** shall be followed:

# **SAMPLE**

1. The bottom of the hole where dead animals are to be buried should be 3 feet above the seasonal high water table wherever possible and at least 12 inches above the seasonal high water table. (Farm owners may contact the local NRCS agency or the local health department for assistance in determining the seasonal high water table.)
2. Standing water in the hole does not preclude animal burial as long as the bottom of the hole is at least 12 inches above the seasonal high water table, not in an area of standing water, and the other conditions for proper burial are met.
3. There must be at least 3 feet of soil covering any buried animal. This can be interpreted to mean soil mounded over the animals above the adjacent ground level.
4. The burial site must be at least 300 feet from any existing stream or public body of water.
5. The burial site must be at least 300 feet from any existing public water supply well.
6. The burial site must be at least 100 feet from any other type of existing well.
7. The burial site cannot include any portion of a waste lagoon or lagoon wall.
8. In the case where the burial site is in a waste disposal spray field, the burial site is not available for subsequent waste spraying until a new viable crop is established on the site.
9. The burial site shall be located so as to minimize the effect of stormwater runoff.
10. Burial is not permitted in the tiled area of an underdrained field.
11. A record of the location of the approved site (GPS latitude and longitude coordinates if available), and the burial history of each burial site (including date, species, head count and age) must be kept by the owner and reported to the Local Health Director who will in turn report this information to the appropriate State Agency – DENR Division of Water Quality, Groundwater Section.
12. Farm owners and operators are encouraged to consider measures that could be taken prior to an imminent emergency that could reduce the impact on the farm and the environment.